
11. (Amended) A method to estimate the volume fraction of asphaltene aggregates, ϕ_{agg} , in incompatible petroleum oil and/or refinery process stream mixtures comprising determining difference between I_L , the low-q plateau intensity corresponding to the asphaltene particles, and I_{HS} , the intensity for perfect hard spheres in the absence of aggregation, wherein I_L and I_{HS} are determined at different volume fractions of mixing, ϕ_m .
